



2022 KPMG U.S. Technology Survey Report

Industrial manufacturing industry insights





Big challenges, big opportunities

Industrial manufacturers have a mixed track record with respect to holistic execution of a digital transformation. They are more likely than other companies to have completed their migration to the cloud, and have enjoyed above-average success deploying artificial intelligence (AI).

But they're playing catch-up on cyber security, where many have underinvested. And they may be slower in progressing their digital transformation strategies overall compared with companies in other sectors. Taken together, these findings from the 2022 KPMG U.S. Technology Survey suggest that industrial manufacturers, who in the survey are dominated by automotive, transportation, aerospace and defense manufacturers, face continued challenges with digital transformation but also have significant opportunities to reap more benefits from it, particularly when it comes to improving the customer and user experience and making greater use of AI.¹

¹ In May and June 2022, KPMG U.S. surveyed 1,052 U.S.-based, executive-level technology leaders across eight broad industry sectors about the current state of their organization's digital transformation journey, the challenges they are facing along that journey, and their planned technology investments. This report highlights the most significant differences in the survey findings for the industrial manufacturing sector relative to all sectors represented in the survey.

Leading in cloud and AI, lagging on cyber security

Industrial manufacturers are, on average, ahead of many other organizations in migrating information systems and applications to the cloud and in deploying AI as part of their digital transformation agenda.

Almost one fifth (19 percent) of industry executives say their organization has completed its migration to the cloud and are now focused on continuous optimization and modernization, versus 13 percent of all companies. And 35 percent say moving to the cloud has increased their organization’s speed to market, versus 25 percent of all companies. More than half (55 percent) say their organization is proactive in progressing against its AI and automation strategy, versus 40 percent of all organizations. Industrial manufacturers are the most likely companies to have deployed natural language processing and to have seen a positive return on their investment in that technology (71 percent versus 61 percent). They also are more likely than other companies to have enjoyed similar success with robotic process automation (59 percent versus 50 percent). (See Figure 1.)

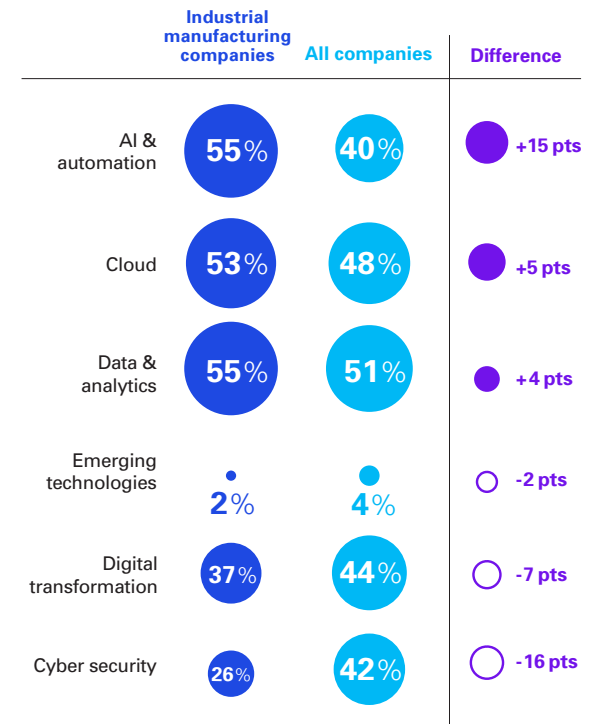
Progress on digital transformation hasn’t been uniformly successful, however. Compared

to organizations in other sectors, industrial manufacturers are least likely to have seen improvements in IT system reliability or resilience as a result of migrating to the cloud (13 percent versus 22 percent of all organizations). Cyber security has proven particularly challenging. Only 26 percent of industrial manufacturers are proactive in progressing against their cyber security agenda, versus 42 percent of all organizations. The likely cause: historic underinvestment in this area. Almost one third (30 percent) of industrial manufacturing executives—more than in any other industry—say prior underinvestment is an influential driver of their company’s increased spending on cyber security today.

“Old habits are hard to break, and many industrial manufacturers initially thought cyber security wasn’t particularly relevant to them because they’re not directly connected to the consumer,” notes Claudia Saran, partner, national sector leader

Figure 1: Leaders in cloud and AI but lagging on cyber security

Percentage of organizations proactive in progressing against their strategy and continually evolving in the following areas:



Source: KPMG U.S. Technology Survey Report, KPMG LLP (U.S.), 2022.

and Advisory industry leader for KPMG in the U.S. “Now they’re seeing that technologies connecting the shop floor to the internet have inadvertently opened doors for bad actors and left their businesses more vulnerable to both ransomware attacks and attacks on their supply chains. Now, ensuring the security of their systems is an area of relatively greater focus.”



“Technologies connecting the shop floor to the internet have inadvertently opened doors for bad actors.”

— Claudia Saran, Partner, National Sector Leader and Advisory Industry Leader, KPMG in the U.S.

LEADING IN CLOUD AND AI *continued*

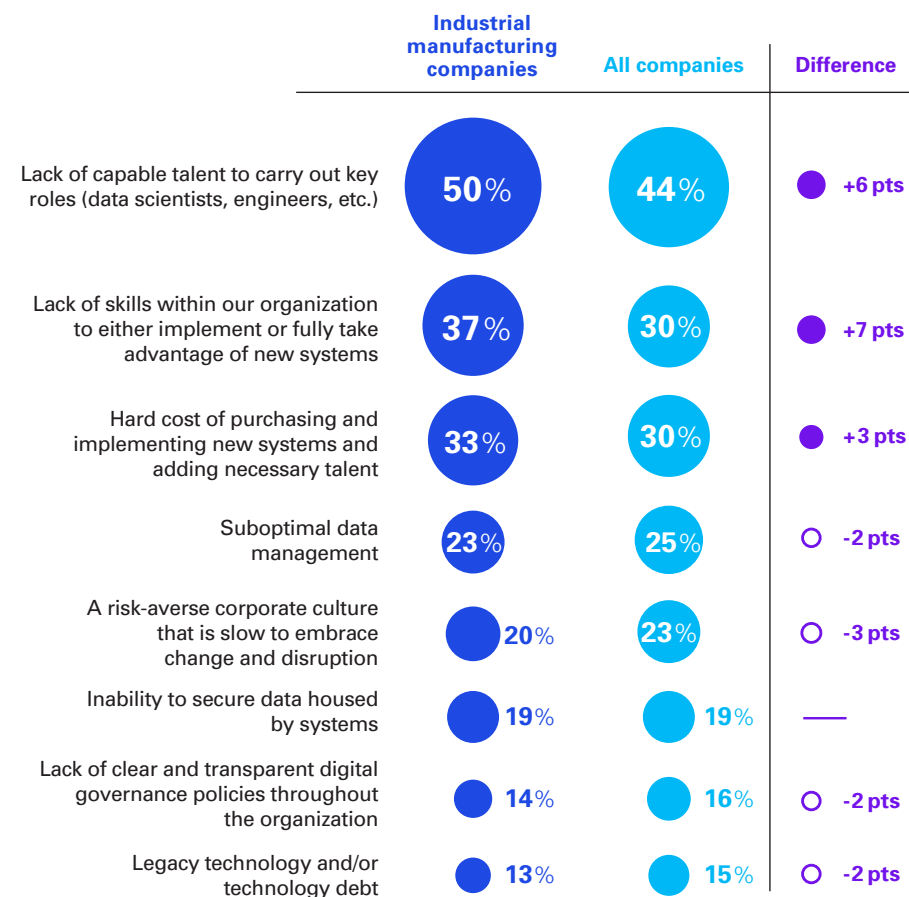
Looking ahead, the most common areas where industrial manufacturers plan to invest over the next 12 months are in improving the customer/user experience and AI/machine learning (55 percent versus 48 percent of all). Notably, 34 percent of industrial manufacturing executives also rank blockchain as a top-five area of investment for their organization over the next 12 months, versus 27 percent of those at all organizations. This likely reflects the role blockchain can play in helping manufacturers manage complex and far-flung supply chains.

Unfortunately, industrial manufacturers may struggle even more than most companies in securing the talent they need to pursue their digital ambitions. Fifty percent of industrial manufacturers are finding their ability to adopt new digital technologies hamstrung by a lack of capable talent in key roles such as data scientist or engineer, versus 44 percent of all companies. And 37 percent of industrial manufacturers—versus 30 percent of all companies—also are being held back by a lack of skills for implementing or fully taking advantage of new information systems. (See Figure 2.)



Figure 2: Lack of skills cited as top challenges to digital transformation

What are the biggest challenges you face in your adoption of new digital technologies?



Source: KPMG U.S. Technology Survey Report, KPMG LLP (U.S.), 2022.

Finding a better way forward

KPMG sees at least four ways industrial manufacturers could get more from their investments in digital transformation. They revolve around linking technology initiatives to business strategy, embracing behavioral change management, getting data strategy right, and leveraging insights from data to improve core activities.

“Companies in this sector are excited about next-generation technology solutions,” says Saran. “But even today we see that they sometimes fail to think about how a new technology will advance their business strategy. Companies need to take a business value-led approach to digital transformation.”

Once they’ve committed to new technology, industrial manufacturers often will need to commit to behavioral change management as well.

“In the excitement of getting solutions up and running, industrial manufacturers sometimes fail to demonstrate sufficient support and empathy for the end user whose job will be impacted by that solution,” Saran says. “When that happens, it’s easy to end up with low adoption rates and ultimately less than full value from your investment.”

Saran encourages manufacturers to begin working early with end users to make sure they understand how new technology solutions will alleviate pain points in their day-to-day work and ultimately feel they’ve been part of the process in making that happen. Where that approach is used, she says, both adoption rates and return on investment improve.

Getting full value from new technology also requires that companies have a sound and comprehensive strategy for data management, governance, security, and privacy. And, once new technology solutions start generating insights from data, Saran says, it’s important to put them to use, leveraging them to improve core activities such as planning, forecasting, budgeting, scheduling, and order management.

To find the talent they need to achieve their digital transformation goals, Saran suggests companies think about how they can position themselves as a compelling place to work for software engineers, data scientists, and other skilled technologists. That means identifying and clearly communicating the opportunities available at all points along a potential hire’s career path. If clear-eyed analysis reveals the company can’t compete on this front—if it simply can’t offer the opportunities, working conditions, and compensation top talent expects—then it may need to look harder at securing that talent from managed services providers and contractors.



Four ways manufacturers can get more from their investments:

- 1 Link technology initiatives to business strategy
- 2 Embrace behavioral change management
- 3 Get data strategy right
- 4 Leverage insights from data to improve core activities.

How KPMG can help

At KPMG, we know business-enabling technology. Our Advisory organization is designed specifically to help leaders succeed at leveraging technology at the accelerated pace business now demands.

Unlike business-only consultancies, our more than 15,000 Technology professionals have the resources, the engineering skills and experience, the battle-tested tools and solutions, and the strategic alliances with leading technology companies to help enable your technology vision and gain momentum for the future. And unlike technology-only firms, we have the industry credentials and experience to help you deliver measurable business results, not just “connect wires.”

Our experience deploying Microsoft, Oracle, Salesforce, Workday, and other leading cloud solutions, means we can help you get to an effective solution, faster.

Whether we’re helping you deploy a new technology, migrate to a new cloud platform, or outsource challenges via our managed services solution, you can count on us to deliver in partnership with your people.

That’s speed to modern technology. That’s smart industrials.

kpmg.com/socialmedia



Contact us



Claudia Saran

Partner, National Sector
Leader and Advisory
Industry Leader,
Industrial Manufacturing,
KPMG in the U.S.
csaran@kpmg.com
+1 312 665 3088

 [Click here](#) to learn how KPMG can help your organization reap the full promise of a tech-enabled transformation.



[Download the full report](#) and discover how KPMG can help you with digital transformation.

Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates and related entities.

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation. The views and opinions expressed herein are those of the interviewees and survey respondents and do not necessarily represent the views and opinions of KPMG LLP.

© 2022 KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved.

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.